

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re PATENT APPLICATION of:

**VAN DER SPEK et al.**

Group Art Unit: unknown

Application No.: unknown

Examiner: unknown

Filed: November 27, 2001

FOR: HALOGEN-FREE FLAME-RETARDANT COMPOSITION

\* \* \* \* \*

November 27, 2001

**PRELIMINARY AMENDMENT**

Hon. Commissioner of Patents

Washington, D.C. 20231

Sir:

Prior to examination on the merits, please enter the following amendment in the application as follows:

**IN THE SPECIFICATION:**

At the top of the first page, just under the title, please insert:

--This is a Continuation of International Application No. PCT/NL00/00293 filed May 8, 2000, which designated the U.S. and was published in English. The contents of this PCT

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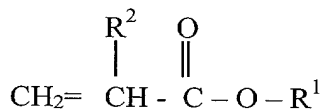
application are incorporated in their entirety by reference.--

**IN THE CLAIMS:**

**Please enter the following amended claims 1-15:**

1. (Amended) Halogen-free, flame-retardant composition comprising at least either an organic phosphorous compound (A),  
melamine or a compound derived from melamine (B),  
or a melamine-phosphorous compound (AB),  
and further comprising  
a polymer compound (C) comprising at least one type of olefin having 2-12 carbon atoms and 0.1-30 weight % relative to the weight of the polymer compound (C) of at least one compound containing acid, acid anhydride or epoxy groups.

2. (Amended) Composition according to Claim 1, wherein the component (C) is a polymer obtained by copolymerizing E, X and Y compounds, wherein E is ethylene, X is a compound having the formula



where

$\text{R}^1$  = alkyl radical having 1-8 carbon atoms

$\text{R}^2$  = H,  $\text{CH}_3$  or  $\text{C}_2\text{H}_5$

and Y is glycidyl (alkyl)acrylate.

3. (Amended) Composition according to Claim 1, wherein said component (C) is an ethylene/acrylic ester/glycidyl methacrylate, ethylene/acrylic ester/maleic anhydride, ethylene/glycidyl methacrylate, ethylene/mathacrylic acid, propylene/maleic anhydride [and] or propylene/acrylic acid polymer.

4. (Amended) Composition according to Claim 3, wherein said component (C) is an ethylene/acrylic ester/glycidyl methacrylate terpolymer.
5. (Amended) Composition according to Claim 4, wherein said component (C) is an ethylene/methylmethacrylic ester/glycidyl methacrylate terpolymer.
6. (Amended) Composition according to Claim 1, wherein said component (C) is an ethylene/alpha-olefin copolymer modified with maleic anhydride.
7. (Amended) Composition according to Claim 1, comprising the organic phosphorous component (A) or the melamine-phosphorous compound (AB) selected from a phosphate, a phosphinate and a phosphonate.
8. (Amended) Composition according to Claim 7, wherein the component (B) or (AB) is selected from melamine, melamine cyanurate, melamine phosphate, melam, melem and mixtures thereof.
9. (Amended) Polycondensate composition comprising the flame retardant composition according to Claim 1, and further comprising a polyester or polyamide.
10. (Amended) Polycondensate composition according to Claim 9, comprising a polyester selected from the group consisting of polyethylene terephthalate, polybutylene terephthalate, polyethylene naphthalate, polyphenylene terephthalate, and polybutylene naphthalate.
11. (Amended) Polycondensate composition according to Claim 9, comprising a polyamide selected from the group consisting of polyamide-6, polyamide-6,6, and polyamide-4,6.
12. (Amended) Polycondensate composition according to Claim 9 further comprising

an organic filler.

13. (Amended) Polycondensate composition according to Claim 12, wherein the inorganic filler is glass fibre.

14. (Amended) Polyester composition comprising at least:

- an organic phosphate or phosphonate; or
- melamine cyanurate, melamine phosphate, melam, melem, or mixtures thereof; and further comprising
- an ethylene/acrylic ester/glycidyl methacrylate polymer;
- glass fibres; and
- a polyester selected from the group consisting of polyethylene terephthalate, polybutylene terephthalate, polyethylene naphthalate, polyphenylene terephthalate, and polybutylene naphthalate.

15. (Amended) Polyamide composition comprising at least:

- an organic phosphate or phosphonate; or
- melamine cyanurate, melamine phosphate, melam, melem, or mixtures thereof; and further comprising
- an ethylene/acrylic ester/glycidyl methacrylate polymer; glass fibres; and
- a polyamide selected from the group consisting of polyamide-6, polyamide-6,6, and polyamide-4,6.

**Please cancel claim 16 without prejudice or disclaimer.**

**REMARKS**

Upon entry of this Amendment, claims 1-16 will be pending, of which claims 1, 14 and 15 are independent. The claims have been amended to eliminate multiple dependencies and to employ more conventional U.S. claim language. In addition, the specification has been amended to include a cross reference to the PCT parent application. It is respectfully submitted that no new matter has been introduced.

It is respectfully submitted that the Application is in condition for allowance and a Notice to that effect is courteously solicited. If any questions remain, however, the Examiner is encouraged to call undersigned to expedite the prosecution of this Application.

Respectfully submitted,

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APPENDIXVERSION WITH MARKINGS TO SHOW CHANGES MADEIN THE SPECIFICATION:

A cross-reference to the PCT parent application has been added.

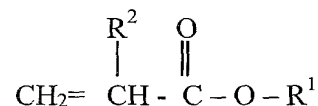
IN THE CLAIMS:

Claims 1 - 15 have been amended as follows:

1. (Amended) Halogen-free, flame-retardant composition [that comprises] comprising at least either an organic phosphorous compound (A), melamine or a compound derived from melamine (B), or a melamine-phosphorous compound (AB),

[characterized in that the composition also contains] and further comprising a polymer compound (C) comprising at least one type of olefin having 2-12 carbon atoms and 0.1-30 weight % [(relative to the weight of the polymer compound)] (C) of at least one compound containing acid, acid anhydride or epoxy groups.

2. (Amended) Composition according to Claim 1, [characterized in that the] wherein the component (C) is a polymer [having a chemical composition based on] obtained by copolymerizing E, X and Y compounds, wherein E [being] is [an] ethylene [radical], X is a [radical formed from the] compound having the formula



where

R<sup>1</sup> = alkyl radical having 1-8 carbon atoms

R<sup>2</sup> = H, CH<sub>3</sub> or C<sub>2</sub>H<sub>5</sub>

and Y is [a radical formed from] glycidyl (alkyl)acrylate.

3. (Amended) Composition according to Claim 1, [characterized in that the] wherein said component (C) is an ethylene/acrylic ester/glycidyl methacrylate, ethylene/acrylic ester/maleic anhydride, ethylene/glycidyl methacrylate, ethylene/mathacrylic acid, propylene/maleic anhydride [and] or propylene/acrylic acid polymer.
4. (Amended) Composition according to Claim 3, [characterized in that] wherein said component (C) is an ethylene/acrylic ester/glycidyl methacrylate terpolymer.
5. (Amended) Composition according to Claim 4, [characterized in that] wherein said component (C) is an ethylene/methylmethacrylic ester/glycidyl methacrylate terpolymer.
6. (Amended) Composition according to Claim 1, [characterized in that] wherein said component (C) is an ethylene/alpha-olefin copolymer modified with maleic anhydride.
7. (Amended) Composition according to [any one of Claims 1-6, characterized in that] Claim 1, comprising the organic phosphorous component (A) or the melamine-phosphorous compound (AB) [is] selected from a phosphate, a phosphinate [or] and a phosphonate.
8. (Amended) Composition according to [any one of Claims 1-7, characterized in that] Claim 7, wherein the component (B) or (AB) is selected from melamine, melamine cyanurate, melamine phosphate, melam, melem [or a mixture] and mixtures thereof [is chosen as component (B) or (AB)].
9. (Amended) Polycondensate composition [that comprises] comprising the flame retardant composition according to [any one of Claims 1-8, characterized in that] Claim 1 and further comprising [the polycondensate is] a polyester or polyamide.
10. (Amended) Polycondensate composition according to Claim 9, [characterized in

that] comprising a [the] polyester [is chosen] selected from the group [comprising] consisting of [PET ([polyethylene terephthalate, ]), PBT ([polybutylene terephthalate, ]), PEN ([polyethylene naphthalate, ]), PPT ([polyphenylene terephthalate, and ]), or PBN ([polybutylene naphthalate])].

11. (Amended) Polycondensate composition according to Claim 9, [characterized in that] comprising a [the] polyamide[ is chosen] selected from the group [comprising] consisting of polyamide-6, polyamide-6,6, and polyamide-4,6.

12. (Amended) Polycondensate composition according to [any one of Claims 9-11, characterized in that] Claim 9 further comprising an organic filler [is also present].

13. (Amended) Polycondensate composition according to Claim 12, [characterized in that] wherein the inorganic filler is glass fibre.

14. (Amended) Polyester composition [that comprises] comprising at least:

- an organic phosphate or phosphonate; or
- melamine cyanurate, melamine phosphate, melam, melem, or mixtures thereof; and further comprising
- an ethylene/acrylic ester/glycidyl methacrylate polymer;
- glass fibres; and
- a polyester [chosen] selected from the group [comprising PET ([ consisting of polyethylene terephthalate, ]), PBT ([ polybutylene terephthalate, ]), PEN ([polyethylene naphthalate, ]), PPT ([polyphenylene terephthalate, and ]), or PBN ([polybutylene naphthalate])].

15. (Amended) Polyamide composition [that comprises] comprising at least:

- an organic phosphate or phosphonate; or
- melamine cyanurate, melamine phosphate, melam, melem, or mixtures thereof; and further comprising



- an ethylene/acrylic ester/glycidyl methacrylate polymer; glass fibres; and
- a polyamide [chosen] selected from the group [comprising] consisting of polyamide-6, polyamide-6,6, and polyamide-4,6.

**Claim 16 is cancelled.**

1. The first part of the report, "Introduction", discusses the importance of the study and the objectives of the research. It also provides a brief overview of the methodology used in the study.